

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application.

1 Claims 1-16 (withdrawn).

1 17. (Currently amended) A silica-based organic film obtained by a method comprising[[the
2 steps of]]:

3 applying a coating solution on a target material to form a coating film, the coating
4 solution containing a reaction product obtained by hydrolyzing, in an organic solvent in the
5 presence of an acid catalyst, at least one first alkoxy silane compound selected from the group
6 consisting of compounds represented by general formula (I):

7 $R^1_2Si(OR^2)_2 \dots (I)$

8 wherein R^1 represents an alkyl group having 1 to 4 carbon atoms or a phenyl group, and
9 R^2 represents an alkyl group having 1 to 4 carbon atoms,
10 and compounds represented by general formula (II):

11 $R^3Si(OR^4)_3 \dots (II)$

12 wherein R^3 represents an alkyl group having 1 to 4 carbon atoms or a phenyl group, and
13 R^4 represents an alkyl group having 1 to 4 carbon atoms,
14 and

15 baking the coating film in an atmosphere having an oxygen concentration of 1000 ppm
16 or less, and at a temperature from 680°C to 750°C to form a film,

17 wherein an etching rate of the silica-based organic film in wet etching using
18 hydrofluoric acid having a concentration of 0.5% by weight at 25°C is 60 angstroms/min or
19 less, and

20 wherein an organic group content, which is represented as a ratio of the total of a peak
21 area of SiR^1 and a peak area of SiR^3 to a peak area of Si-O-Si in a spectrum obtained by
22 measuring an infrared absorption spectrum of the film, is 0.01 or more.

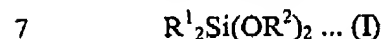
1 18. (Cancelled)

1 19. (Cancelled)

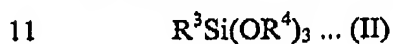
1 20. (Currently amended) The silica-based organic film according to claim [[18]] 17, wherein a
2 carbon content is from 6 to 18 atm%.

1 30. (Currently amended) A silica-based organic film obtained by a method[[.]] comprising[[the
2 steps of]]:

3 applying a coating solution on a target material to form a coating film, the coating
4 solution containing a reaction product obtained by hydrolyzing, in an organic solvent in the
5 presence of an acid catalyst, at least one first alkoxy silane compound selected from the group
6 consisting of compounds represented by general formula (I):

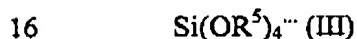


8 wherein R^1 represents an alkyl group having 1 to 4 carbon atoms or a phenyl group, and R^2
9 represents an alkyl group having 1 to 4 carbon atoms,
10 and compounds represented by general formula (II):



12 wherein R^3 represents an alkyl group having 1 to 4 carbon atoms or a phenyl group, and R^4
13 represents an alkyl group having 1 to 4 carbon atoms,

14 and at least one second alkoxy silane compound selected from the group consisting of
15 compounds represented by general formula (III):



17 wherein R^5 represents an alkyl group having 1 to 4 carbon atoms,
18 and

19 baking the coating film in an atmosphere having an oxygen concentration of 1000 ppm
20 or less, and at a temperature from 680°C to 750°C to form a film,

21 wherein an etching rate of the silica-based organic film in wet etching using
22 hydrofluoric acid having a concentration of 0.5% by weight at 25°C is 60 angstroms/min or

23 less, and
24 wherein an organic group content, which is represented as a ratio of the total of a peak
25 area of SiR¹ and a peak area of SiR³ to a peak area of Si-O-Si in a spectrum obtained by
26 measuring an infrared absorption spectrum of the film, is 0.01 or more.

1 31. (Cancelled)

1 32. (Cancelled)

1 33. (Previously added) The silica-based organic film according to claim [[31]] 30, wherein a
2 carbon content is from 6 to 18 atm%.